

The Alternative Fuels Data Center – Providing Biofuels Tools and Information

www.eere.energy.gov/afdc

The U.S. Department of Energy's (DOE's) Alternative Fuels Data Center (AFDC) was created in 1991 in response to federal legislation encouraging greater use of alternative fuels to displace petroleum. Developed by DOE's National Renewable Energy Laboratory, the AFDC provides data, documents, online tools, and other resources to enable implementation of alternative fuel and advanced vehicle technologies at the local and regional levels. Supported by the Clean Cities and EAct Fleet activities within DOE's FreedomCAR and Vehicle Technologies Program, the AFDC continues to be an unbiased source of data related to biofuels and other alternative fuels.

The AFDC was used by more than 1.5 million Clean Cities stakeholders, industry representatives, fleets, consumers, and university students in fiscal year 2006. Thousands of documents and several interactive tools help users make fuel and vehicle purchase decisions, infrastructure evaluations, fueling choices, fleet management decisions, and contact with experts, among other capabilities. The goal of the AFDC is to provide unbiased, technically sound information that explains the benefits, challenges, and opportunities for alternative fuels and vehicles.

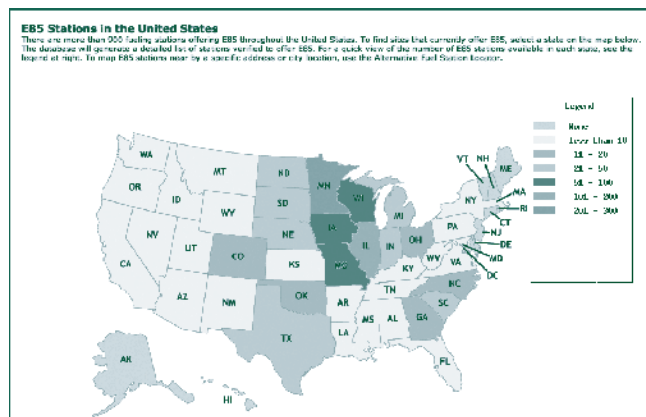
A large portion of AFDC resources focuses on biofuels data and information. The AFDC contains more than 1,300 documents, dozens of Web pages, and several online tools specific to biodiesel and ethanol. We provide a complete list, below.

AFDC Ethanol Web Sites and Tools

Ethanol Portal (www.eere.energy.gov/ethanol)

The U.S. Department of Energy Ethanol Portal is the gateway to E85 information. It provides links to:

- Ethanol Basics
- The Campaign for an American Fuel
- E85 Fleet Infrastructure Resources



U.S. Department of Energy
Energy Efficiency and Renewable Energy

Bringing you a prosperous future where energy is clean, abundant, reliable, and affordable

Ethanol

Ethanol is a renewable transportation fuel that is a key element in the U.S. Department of Energy's Advanced Energy Initiative. Ethanol produced in the United States is typically made from starch crops, primarily corn. It can also be made from sugar crops or agricultural waste and "cellulosic biomass," such as fast-growing trees and switchgrass.

DOE's FreedomCAR and Vehicle Technologies Program maintains a wide range of information about ethanol and other alternative fuels in the Alternative Fuels Data Center through its Clean Cities activity. This page links to relevant information on these sites about ethanol.

- Ethanol Basics**
 - What is Ethanol?
 - What is E85?
 - How is Ethanol Made?
 - Ethanol Market
 - Ethanol Benefits
 - Ethanol Blends
 - Ethanol Publications
 - Ethanol Industry Contacts
 - Ethanol Related Links
 - Energy Balance of Ethanol
- Drive an Ethanol Vehicle**
 - Current Models
 - Used Vehicles
 - Flexible Fuel Vehicle Cost Calculator
- Fueling with Ethanol**
 - Finding an Ethanol Station
 - Installing an Ethanol Station
 - The Campaign for an American Fuel: Powering Flex Fuel Vehicles with E85

Handbook for Handling, Storing, and Dispensing E85

U.S. Department of Energy
Energy Efficiency and Renewable Energy
A DOE program of the National Renewable Energy Laboratory
1500 Broadway, Suite 300
Golden, CO 80401-1500

- E85 Fueling Stations
- Flex Fuel Vehicles (FFVs)
- FFV Cost Calculator
- Ethanol R&D Updates
- Energy Balance Issues
- Incentives and Laws

DOE's E85 Fleet Toolkit (www.eere.energy.gov/afdc/e85toolkit/)

- A Web site geared to help fleets install E85 infrastructure, learn about codes and standards related to E85 fueling equipment, and evaluate equipment options.

DOE's Campaign for an American Fuel (www.eere.energy.gov/afdc/e85campaign/)

- This campaign helps unite fuel suppliers and flexible fuel vehicle (FFV) dealers to increase the sales of FFVs and E85.



U.S. Department of Energy

Energy Efficiency and Renewable Energy

Bringing you a prosperous future where energy is clean, abundant, reliable, and affordable

E85 Fueling Stations (www.eere.energy.gov/afdc/infrastructure/e85_stations.cgi) - Search for E85 stations near you and across the country. You'll also find a trip planner, station maps, and state-by-state station counts.

E85 State and Federal Incentives and Laws (www.eere.energy.gov/afdc/laws/e85_incentives.cgi) - This tool allows you to easily search for E85 incentives and laws by state. To get federal incentives and laws related to E85, go to: www.eere.energy.gov/afdc/progs/ind_fed_incentive.cgi.

Available FFVs (www.eere.energy.gov/fleetguide/vehicle_search.php?Light-Duty*Cars*and*Trucks/Fuel-Technology/2006/Ethanol-Flexible*Fuel) - View and compare all available vehicles that can operate on E85.

FFV Cost Calculator (www.eere.energy.gov/fleetguide/cost_anal.php?0/E85*Flex*Fuel/) - Use this tool to calculate the cost and emissions differences of driving a vehicle fueled with E85 versus gasoline.

Ethanol Blends (www.eere.energy.gov/cleancities/blends/ethanol.html) - This Web site covers information related to low level blends of ethanol (blends with 10% or less of ethanol).

E85 Documents

Ethanol: The Complete Energy Lifecycle Picture (www1.eere.energy.gov/vehiclesandfuels/pdfs/program/ethanol_brochure_color.pdf) - A 4-page brochure explaining the positive energy balance of ethanol using the Greenhouse Gases Regulated Emissions and Energy Use in Transportation (GREET) model of life-cycle analysis.

Handbook for Handling, Storing, and Dispensing E85 (www.eere.energy.gov/afdc/pdfs/40243.pdf) - A 32-page handbook explaining the production, properties, storing, and dispensing of E85 as a transportation fuel. Information on EPA and flex fuel vehicles is also provided.

Flexible Fuel Vehicles: Powered by an American Fuel (www.eere.energy.gov/cleancities/toolbox/pdfs/39407.pdf) - Frequently asked questions and their answers regarding E85 and flexible fuel vehicles.

Low-Level Ethanol Fuel Blends (www.eere.energy.gov/cleancities/blends/pdfs/37135.pdf) - Transportation fuels containing 10% or less ethanol are the topic of this 2-page fact sheet.

AFDC Biodiesel Web Sites and Tools

Biodiesel Basics (www.eere.energy.gov/afdc/altfuel/biodiesel.html) - This page provides information and links to biodiesel information, industry contacts, and related links.

Biodiesel Fueling Stations (www.eere.energy.gov/afdc/infrastructure/locator.html) - Search for biodiesel stations near you and across the country. This tool includes stations that offer biodiesel blends at the pump. You can also use it to identify biodiesel stations along a specific driving route.

Biodiesel State and Federal Incentives and Laws (www.eere.energy.gov/afdc/laws/incen_laws.html) - Search for biodiesel incentives and laws by state or see federal incentives and laws related to biodiesel.

Biodiesel Blends (www.eere.energy.gov/cleancities/blends/biodiesel.html) - Learn about lower level blends of biodiesel such as B2 (2% biodiesel and 98% diesel) and B5 (5% biodiesel and 95% diesel).

Biodiesel Documents

Biodiesel Handling and Use Guidelines (www.nrel.gov/vehiclesandfuels/nphf/feature_guidelines.html) - A 72-page handbook for those who blend, distribute, and use biodiesel and biodiesel blends. It offers information on biodiesel properties, as well as the safety, health, and environmental considerations of using the fuel.

Biodiesel Blends Fact Sheet (www.eere.energy.gov/cleancities/blends/pdfs/37136.pdf) - A look at the properties and performance of biodiesel blends in the range of 2%–20% biodiesel.

Additional Biofuels Organizations and Links

American Coalition for Ethanol (www.ethanol.org)

Ethanol Promotion and Information Council
(www.drivingethanol.org/)

National Biodiesel Board (www.biodiesel.org/)

National Ethanol Vehicle Coalition
(www.e85fuel.com/index.php)

Renewable Fuels Association (www.ethanolrfa.org/)

For additional information
please call the EERE Information Center at:
1-877-EERE-INF or (1-877-337-3463)

Sponsored by the U.S. Department of Energy
Energy Efficiency and Renewable Energy
FreedomCAR and Vehicle Technologies Program

For more information contact: EERE Information Center
1-877-EERE-INF (1-877-337-3463)
www.eere.energy.gov

A Strong Energy Portfolio for a Strong America
Energy efficiency and clean, renewable energy will mean a stronger economy, a cleaner environment, and greater energy independence for America. Working with a wide array of state, community, industry, and university partners, the U.S. Department of Energy's Office of Energy Efficiency and Renewable Energy invests in a diverse portfolio of energy technologies.

DOE/GO-102006-2367 • November 2006

Prepared by the National Renewable Energy Laboratory (NREL)
NREL is a U.S. Department of Energy National Laboratory
Operated by Midwest Research Institute • Battelle

Neither the United States government nor any agency thereof, nor any of their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States government or any agency thereof. The views and opinions of authors expressed herein do not necessarily state or reflect those of the United States government or any agency thereof.

Printed with a renewable-source ink on paper containing at least 50% wastepaper, including 10% postconsumer waste.